

Opportunities in Private Equity

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In the past, private equity (PE) was simply defined as “capital that is not noted on a public exchange.” However, as PE has grown and evolved, for most investors there is no longer a simple or all-inclusive description. Investors today can access PE through equity or debt securities, or a hybrid of both, in a public or private company. For our discussion, we define PE broadly as equity capital that provides illiquid long-term investments in companies at various stages in their life cycles, from start-ups to more established firms.

In this paper we will discuss the evolution of the industry, how performance is calculated and compared against those of other investment strategies, the benefits and risks of investing, and where in PE investors should look to consider allocating today. By pooling capital from investors, compiling a diverse portfolio of companies and building businesses in an attempt to maximize long-term results, PE not only has the potential to outperform on an absolute basis, but also to provide diversification and lower correlation to traditional equity investments. This possibility of generating strong risk-adjusted performance is what makes PE such a compelling asset class and worthy of a deeper discussion.

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The Rise in Private Equity

While private equity has been a source of investment capital for decades, it is still considered a boutique investment category, representing only 2.5% of the global invested capital market.¹ In the early days, the private equity universe was limited to a select few venture capital or buyout funds, often located primarily on the West Coast or the Northeast. Today, awareness of private equity has increased and it has become an investment class that is accepted and commonly used by many institutional plans.

The private equity industry is now a large, global and developed industry. Its popularity is evident in the growth in PE assets under management (AUM), which combines the amount invested in private equity and the amount of new funds committed to future private equity investments. As illustrated in Exhibit 1, in the last 15 years alone, private equity AUM have grown almost five times to a record \$2.4 trillion as of December 2015.²

Along with other alternative investments, the private equity industry has evolved to include a variety of strategies and as a result now appeals to a greater variety of investors. Investors can access PE directly through venture capital or buyout funds, or a hybrid of both, such as co-investment vehicles or secondary vehicles.

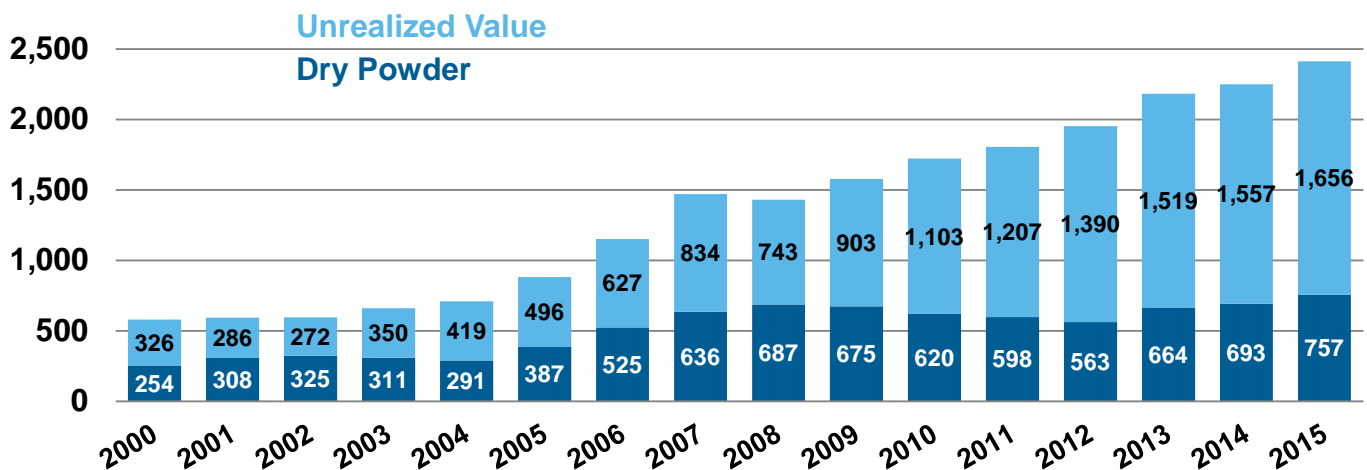
Types of Strategies

Some of the most common private equity strategies are outlined below:

Buyout. Buyouts, or leveraged buyouts (LBO), are equity investments to acquire a controlling interest in a company, typically with the use of financial leverage, and are usually categorized from small/mid to large/mega capital funds. Investors in buyout strategies are interested in more mature companies with demonstrated cash flow, making the four primary drivers of buyout returns earnings, earnings multiple, debt and time. Most importantly, a buyout will invariably involve the use of debt. Indeed, today’s financial engineering solutions for buyouts will often involve various layers of debt, ranging from straight senior debt secured by the company’s assets to pure cash flow lending with equity kickers, what’s known as mezzanine financing. Debt plays a key role in the generation of buyout returns, operating to enhance equity returns. Buyouts can be distinguished from our next strategy, venture capital, in a number of ways. Chief among these are that buyouts generally focus on established companies rather than young businesses and the fact that buyouts use debt as well as equity financing (and frequently combinations of the two). Another apparent distinction is between “control” and “noncontrol” investing. In control investing, the private equity manager either owns a majority of the shares in the company or at least has control over the majority of the voting rights.

Exhibit 1: Private Equity Assets Under Management Have Soared

\$ 3,000 Billion



Source: *Private Equity Spotlight*, Prequin, September 2016 Data Pack

¹ *Global Invested Capital Market*, Hewitt Ennisknupp: An Aon Company, June 2014

² *Private Equity Spotlight*, Prequin, September 2016 Data Pack

Venture Capital. Venture capital generally means an investment in a company prior to an initial public offering, and often early in the company's life cycle. Venture investments are most often found in the application of new technology, new marketing concepts and new products with an unproven track record or lack of a stable revenue stream. Venture capital is often subdivided by the stage of development of the company, ranging from early-stage capital used for the launch of start-up companies to late-stage and growth capital that is often used to fund expansion of an existing business that generates revenue but may not yet be profitable or generating cash flow to fund future growth. Venture deals, unlike buyout deals for the most part, will enjoy successive rounds of financing, and the point in the company's development when each of these rounds occurs will determine whether such a round is, for example, "early" or "mid." The basic drivers of a venture fund's returns are the post-money valuation of the rounds and the percentage of the company's equity which a fund holds. By far the most important measure of venture performance is the money multiple, i.e., the ratio of the total amount of cash generated by an investment to the total amount of cash invested. The internal rate of return (IRR) is also important, but is largely meaningless in the early to mid-stages of a fund given the longer average holding periods of venture funds. We discuss private equity performance in a later section.

Growth Capital. Growth capital is an investment in more mature companies to provide funding for growth and expansion. Growth capital is usually provided to later-stage companies with products and services that are already generating significant revenue. Companies that seek growth capital will often do so in order to finance transformative events in their life cycle.

Distressed and Special Situations. Distressed private equity strategies look at companies experiencing financial stress that appear to be poised for a possible turnaround. A substrategy for distressed investing is "distressed-for-control," which involves investors acquiring debt securities in the hopes of emerging from a corporate restructuring in control of the company's equity. Special situation strategies are seeking undercapitalized segments of niche markets where private equity capital can exploit opportunities. Special situation strategies are also referred to as "turnaround" strategies where an investor will provide debt and equity investments, often in the form of rescue financing, to companies undergoing operational or financial challenges.

Secondaries and Co-Investments. Secondary fund opportunities involve acquiring direct interests of primary funds from existing limited partners, usually at a discount to the portfolio's net asset value. Secondary investments provide institutional investors, particularly those new to private equity, with the ability to improve vintage year, sector and geographical

diversification. Secondaries also typically experience a different cash-flow profile, diminishing the J-curve effect of investing in new private equity funds (Exhibit 4, see page 5). Often investments in secondaries are made through a third-party fund vehicle, structured similarly to a fund of funds although many large institutional investors have purchased private equity fund interests through secondary transactions. Co-investment opportunities involve investing alongside general partners in individual deals. They typically are offered to preferred existing limited partners in the fund on a no-fee and no-carry basis. Co-investments are usually prevalent in a market environment where debt financing is difficult to obtain or prohibitively expensive, or where general partners are limited by portfolio constraints on single investments in their fund, and have to partner to meet equity requirements.

Other Strategies. There are numerous other strategies that can be considered private equity. These strategies include real estate, infrastructure, energy and royalty-fund investing. Real estate in the context of private equity will typically refer to the riskier end of the investment spectrum including "value-added" or "opportunistic" funds where the investments often more closely resemble buyouts than traditional "core" real estate investments. Infrastructure investments are in various public projects, typically made as part of a privatization initiative. Energy investments are in a wide variety of companies engaged in the production and sale of energy. Additionally, royalty investments purchase a consistent revenue stream deriving from the payment of royalties.

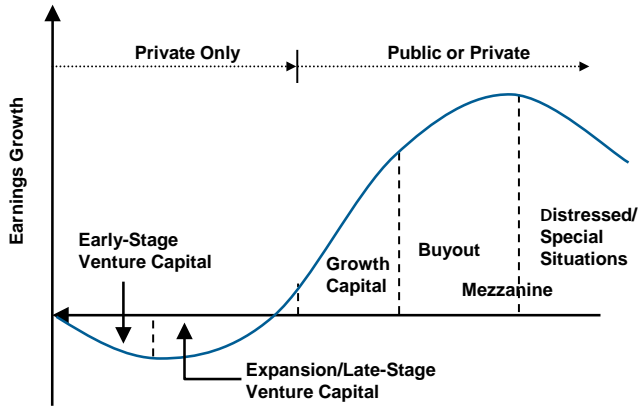
Private Equity Life Cycle and Performance

Private equity fund managers have four principal roles: raise funds from investors, source investment opportunities, select the most appropriate investments, and actively manage and realize capital gains by monetizing these investments. Remember, these events can vary depending on the strategy but each stage typically occurs in a company's life cycle (Exhibit 2, see page 4).

Private equity funds differ in strategy, structure, and objective compared to more traditional investment funds. For one, private equity funds are unlike any other form of investment in that they represent a stream of unpredictable cash flows over the life of the fund, both inward and outward. These cash flows are unpredictable not only as to their amount, but also as to their timing. The life cycle stage of the private equity investment is pivotal for deciding which strategy to put into place.

The private equity life cycle begins with investors, or the limited partner (LP), making a capital commitment to a fund. Once a fund is closed to new commitments, the general partner (GP)

Exhibit 2: Stages of a Company Life Cycle



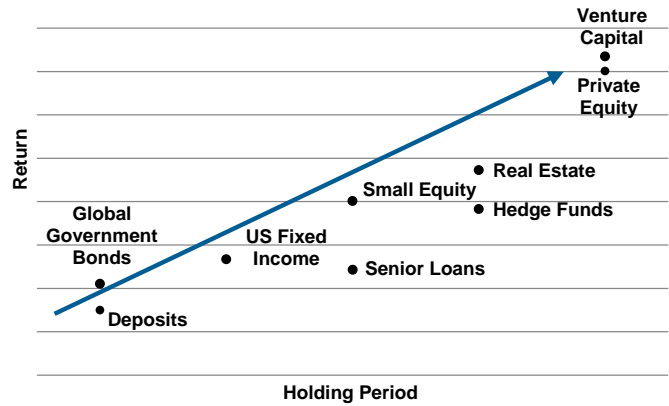
Source: Morgan Stanley Wealth Management GIMA

will begin to allocate capital to appropriate investments. This “investment period” can vary but typically ranges between two to four years. As individual investments are identified, the GP will “call” a pro-rata share of the previously committed capital from investors to fund selected investments. This activity will be repeated as new opportunities are identified and committed capital is depleted. At the end of the investment period, the GP will focus on cultivating the investments made by the fund. This phase depends on the specific underlying investments, though typically it can last two to five years. Distributions are on the other side of the cash flow coin. As the investments mature, the GP shifts into “harvest” mode and will actively seek to monetize investments and return capital to investors in the form of principal and capital gains. When a fund exits an investment by sale or going public, cash should be available to return to investors. In the end, an investment in a private equity fund is a long-term commitment of capital that can typically last seven to ten years and potentially more. Additionally, investors should consider that the market environment and external factors play influential roles in a private equity investment’s life cycle. Particular strategies can be implemented based on these factors and the company’s stage in the life cycle.

The Illiquidity Premium

It is important when thinking about private equity returns to remember the illiquidity associated with these investments. This “illiquidity premium” is expected to compensate investors for giving up access to their capital. This illiquidity can be a risk but has benefits as well (Exhibit 3). Modern Portfolio Theory holds that investors expect to be compensated for the level of risk taken.

Exhibit 3: Returns Typically Increase With Level of Illiquidity



Source: *Patient Capital Private Opportunity*, Blackstone, September 2014

The illiquidity premium is a potential benefit to investors in private equity. It is defined as the extra yield investors expect to earn for giving up control to liquidate their capital for a certain period of time. However, quantifying the illiquidity premium is difficult given the idiosyncratic nature of private investments, individually, or as a portfolio. While many factors contribute to a fund’s return, all funds have some degree of market risk which influences returns and liquidity. Macroeconomic market factors that are strategy-specific or influence the broader environment can impact long-term funds just as they do more conventional liquid funds, resulting in variations in the illiquidity premium.

Private Capital: From Committed to Drawdown to Invested

In the private equity world, the money committed by limited partners, committed capital, is not usually invested immediately. It is “drawn down” and invested over time as investments are identified. Drawdowns, or capital calls, are issued to limited partners when the general partner has identified a new investment and a portion of the limited partner's committed capital is required to pay for that investment. The first year that the private equity fund draws down or “calls” committed capital is known as the fund's vintage year. Invested capital, as the name suggests, is that part of drawn-down capital which has actually been invested in companies.

Performance: From IRR to MOIC to DPI

Given the unique features of private equity investing relative to more traditional investments, private equity looks at performance in a different manner. The three most common measures of performance are the internal rate of return (IRR), multiple on invested capital (MOIC) and distribution over paid-in (DPI). Private equity returns are calculated and stated not as the annual returns of any particular year, but as compound returns from a certain year (the year of formation of the fund) to a specified year.

IRR. The most common method to quantify and measure PE returns is the internal rate of return. It signifies the annualized effective compound rate of return that makes the net present value of all cash flows equal to zero. An IRR calculation can therefore be useful when comparing funds of similar vintages and risk.

MOIC. Another measurement of private equity performance is the multiple on invested capital, also known as the “money multiple.” The MOIC is a multiple based on all realized distributions, plus any unrealized or residual value divided by paid-in capital. It gives a potential investor insight into the fund’s performance by showing the fund’s total value as a multiple of its cost basis.

DPI. This measurement compares the total amount of money paid out (distributed) by a fund to its LPs to date against the total amount of money paid into the fund by LPs. This is one of the better multiples to measure the performance of a fund once it is at the end of its life, since it shows the performance relative to all money paid in, i.e., money that has been used to pay fees as well as money that has been invested in companies. Note that while multiples can be a valuable measure of private equity fund returns, there is a direct trade-off between an IRR and multiple, with a

longer holding period (such as typically encountered with a venture fund) needed to result in a higher investment multiple in order to generate the same IRR.

The J-Curve Effect

Another important characteristic of private equity fund performance is illustrated by the “J-curve.” In private equity, the J-curve is used to illustrate the historical tendency of private equity funds to deliver negative returns in early years and investment gains in the outlying years as portfolio assets mature. In the early years, fund fees are incurred and investments are made that typically result in more cash outflows than inflows. This cash outflow results in performance that typically will decline, level off and then turn positive as seen in Exhibit 4 below, resulting in what resembles the letter “J” over time. As companies are selected for the fund’s portfolio and, it is hoped, generate cash flow, inflows will exceed outflows. Investors will still pay an annual fee, but theoretically, the fund investment should grow over time. While the economic outcome of a private equity fund investment is not known for years, successful fund performance typically follows a J-curve pattern.

Measuring Fees

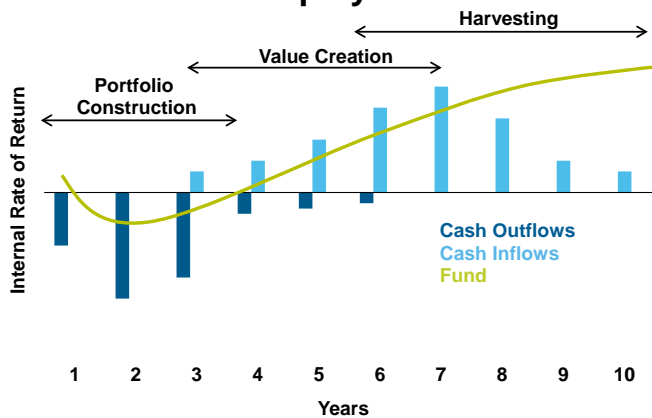
It is important to note that private equity returns should be stated net of fees, expenses, and carried interest. This is because the returns are calculated on money going into the fund (which will include money drawn down for payment of fees and expenses) and money distributed out of the fund (from which carry will already have been deducted where appropriate). Managers, after clearing a “hurdle” rate, benefit through various fees. The two most common in PE are management fees and performance fees (commonly known as carried interest). For example, the fee structure often referred to as “2 and 20” is shorthand for a 2% management fee and a 20% carried interest.

Management Fee. This is the cost of having your investment professionally managed. Generally, this is a 1.0%-to-2.5% charge on committed capital, though we are seeing a trend toward fees on invested capital. The management fee often declines over time, and tends to be inversely proportional to fund size.

Carried Interest. This is a share of any profits that the private equity GP receives as compensation. The typical range is between 10% and 20%. It is paid as soon as, and as long as, the cumulative realized return from fund inception to date exceeds the hurdle rate.

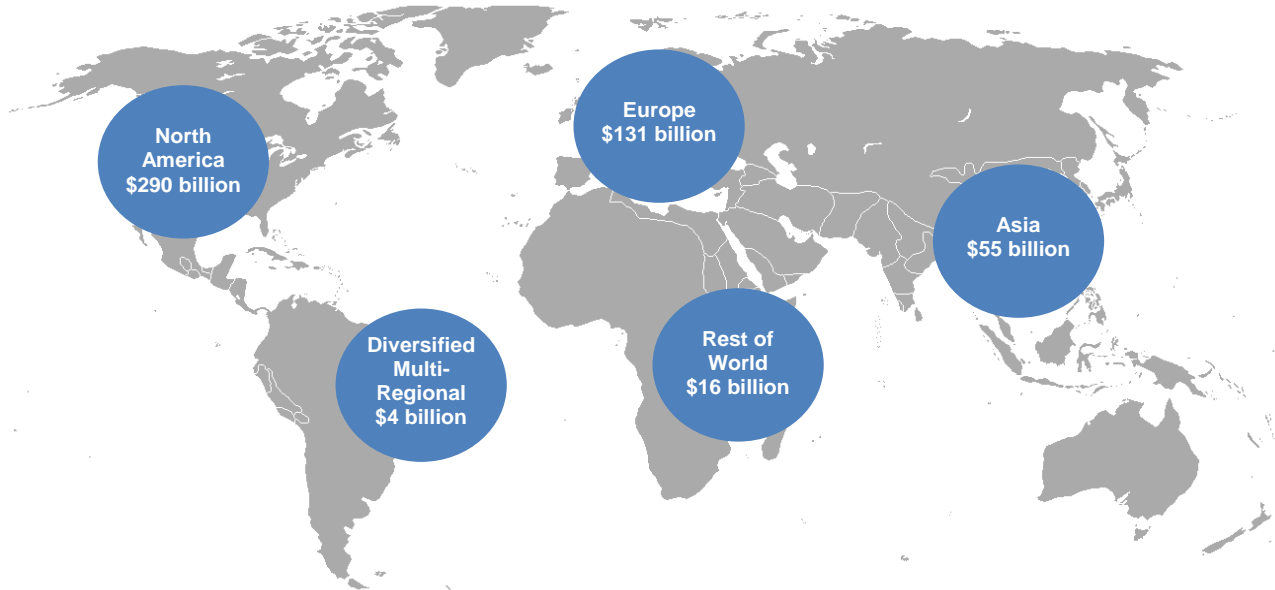
Hurdle Rate. This is the minimum return that a fund must generate on the cash invested in order for the general partner to receive carried interest. The hurdle rate, also called “preferred return,” can vary though typically is around 8%. Once exceeded,

Exhibit 4: J-Curve Hypothetical Cash Flows of Private Equity Fund



Source: Morgan Stanley Wealth Management GIMA

Exhibit 5: Aggregate Capital Raised by PE Funds in 2014 by Primary Region



Source: Global Private Equity and Venture Capital Report, Preqin 2015

the GP gets a “catch up” on the carried interest up to the hurdle rate. Note a clawback provision should be included to protect investors. This provision allows for the return of performance fees in the event the return of the fund ultimately declines below the hurdle rate.

Investing in the Private Equity Market

Geographical Breakout

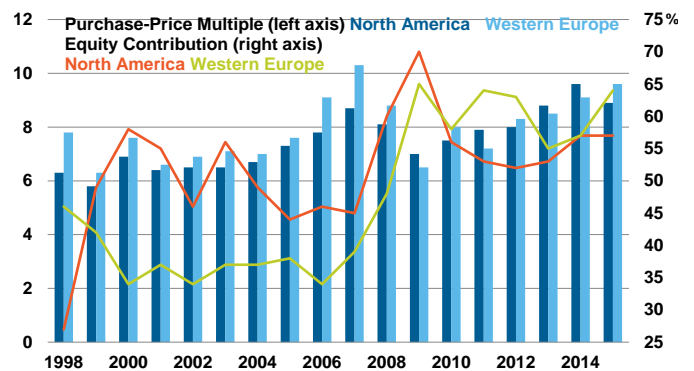
Geographically, the private equity market is predominately focused throughout North America and Europe, although, many investors remain committed to investing in emerging markets. As illustrated in Exhibit 5, the geographical focus of private equity has grown in the past decade, but remains particularly strong in North America and Europe.

Current Market Pricing

The private equity market has experienced strong growth in recent years due in large part to the volatility of public equity markets, concern over the returns in fixed income, and a search for higher returns in a low interest-rate environment. Since the financial crisis, investors have sought diversification from the volatility of equity returns and are more willing to sacrifice some liquidity. The average investor also recognizes the importance of

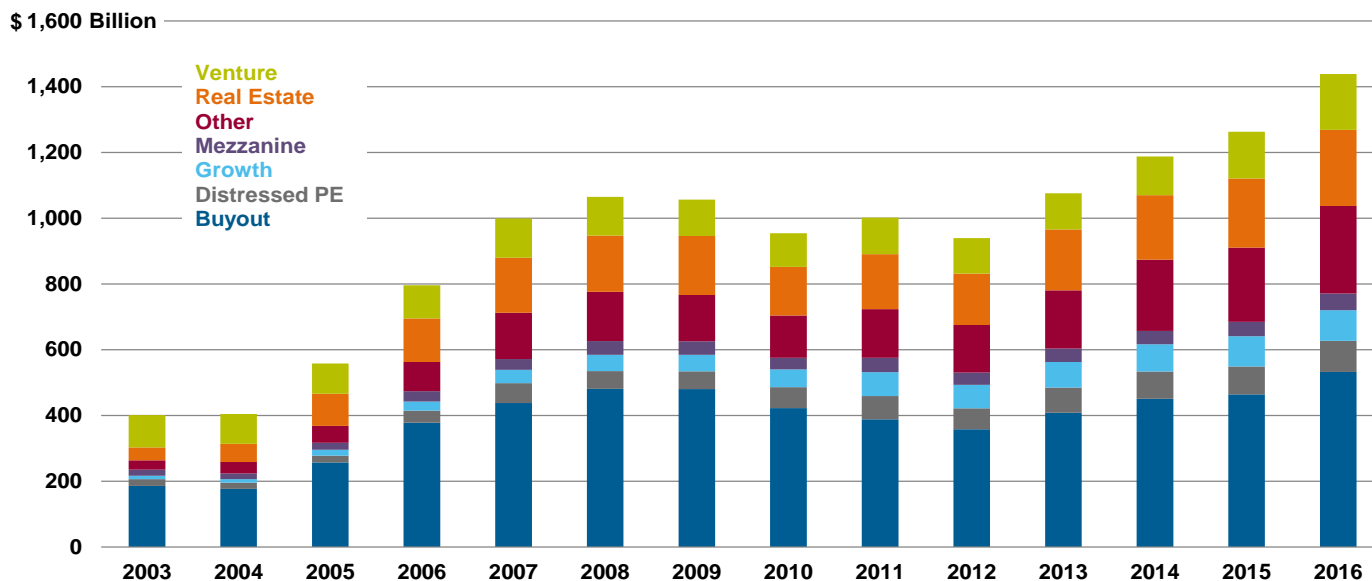
diversification in their investment portfolio, and wants to participate in more than just the public market in hopes of a higher return. The timing appears to be good as today’s private equity managers are exhibiting more discipline and selectivity even in a robust and pricey deal environment. Still, deal flow and exit activity seem to be cresting while inexpensive and readily available credit continues to support above-average capital flows into the space. With more available

Exhibit 6: PE Pricing Returns to 2006-2007 Levels, but Equity Contributions Are Higher



Source: Hamilton Lane as of August 2015

Exhibit 7: Estimated Dry Powder Is High, Making Managers More Selective



Source: Hamilton Lane as of August 2016

capital and strong demand, the current environment is witnessing an increase in the price of deals. In some regions, pricing multiples are now higher than pre-crisis levels, especially in the large-cap space (Exhibit 6). However, today's deals generally have a bigger equity cushion and thus are more likely to survive a soft economy.

Dry Powder

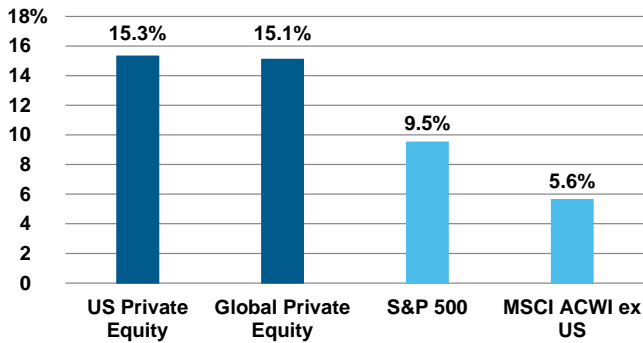
As a result of these high multiples, GPs are more selective and patient in committing to deals, resulting in a dearth of "dry powder," a term that refers to the amount of cash reserves or liquid assets available for a private equity fund to deploy or available funds to invest. There is an ongoing concern that high dry powder levels are increasing competition for deals, making it harder for general partners to find attractive investment opportunities, which may ultimately impact returns. However, dry powder acts as a safety net to provide cash for future unpredicted financial obligations in an otherwise illiquid investment. It can be an advantage for private equity funds to have particularly during an economic downturn. While the locked-up nature of the private equity structure can be a drawback, we believe it is a benefit that allows fund managers to be patient and augment performance over the long term. As of the beginning of August 2016, estimated private equity dry powder (including real estate and other assets) reached a high of about \$1.4 trillion as shown in Exhibit 7.

Benefits and Risks in PE investing

Private equity is a model that supports an environment of strong long-term investment performance. First, the long holding period is ideal for patient investors, allowing portfolio managers to be selective. Hence, private equity capital is often referred to as "patient capital." Additionally, private equity provides a mechanism for qualified investors to access opportunities that would not be otherwise available. This structure provides both diversification and correlation benefits relative to traditional equity like investments. While private equity may offer meaningful benefits, it is not without its drawbacks. Illiquidity is one of the primary risks for private equity because the structure does not allow for redemptions and investor capital is locked up for a significant period of time. Additionally, because investments are not publicly traded, valuation opacity creates pricing challenges. How and when underlying assets are valued is an important consideration for investors. Also, cost has been an issue and therefore is increasingly in the crosshairs of both investors and regulators. Lastly, in large part because of the structure and types of investments, there is an inherent lag in receiving information for which investors need to be cognizant, along with less regulatory oversight in private markets.

While private equity does involve various risks, historical results indicate that higher returns from PE more than compensate an investor for the illiquidity and risk that comes with the

Exhibit 8: Private Equity Outperformed For the Period 1990 Through 2015

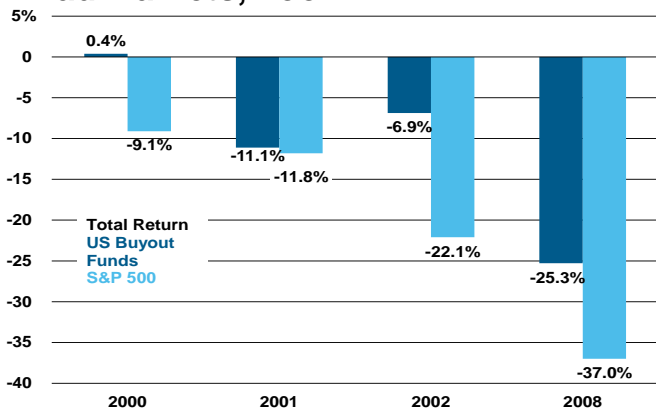


Source: FactSet, Thomson ONE. Private equity index data sourced from Thomason ONE's Cambridge Associates benchmarking data base. As of fourth-quarter 2015

investment. Based on industry data, private equity has over the long term outperformed the public markets. As illustrated in Exhibit 8, the potential for exceeding returns beyond public equity is one of the main benefits of private equity investing.

Additionally, during years when the public markets declined, private equity outperformed the S&P 500 Total Return Index by amounts ranging from 69 to 1,522 basis points. Over these four periods, shown in Exhibit 9, private equity outperformed the S&P 500 in 10 of the 16 quarters with an average of 639 basis points.

Exhibit 9: Private Equity Outperformed In Bad Markets, Too



Source: FactSet, Thomson ONE. Private equity index data sourced from Thomason ONE's Cambridge Associates benchmarking data base. As of fourth-quarter 2015

Secondary Private Equity Investing

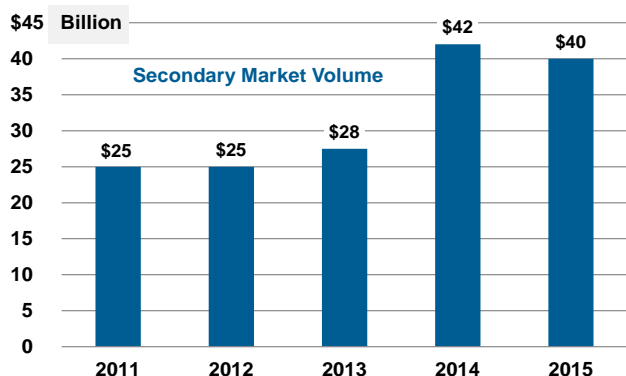
It is widely assumed by investors that private equity funds are purely illiquid investments. While this is firmly true by definition (in the sense that they are not quoted on an exchange) it is not true as a matter of practice, because a very active secondary market exists. Today, if you hold an interest in a private equity fund and wish to sell it (thus also bringing to an end your obligation to continue to fund capital calls) then there are a significant number of specialist secondary purchasers who will pay for your interest. While the secondary market still pales in comparison with the \$2.4 trillion in managed private equity investment worldwide in our view, it has matured to the point where secondary private equity has become a potential liquidity solution for an illiquid asset class. Of course, private equity secondary investing does have its risks. For one, the most desirable managers, funds and vintages usually have limited availability and may be impossible to access. Next, since secondary investments typically take place later in a fund's life cycle, the return profile is generally lower than for earlier investors, who take on more of the risk. Additionally, there are inherent risks around the liquidation of private equity assets such as the uncertainty of valuations and the demand for different vintages and managers.

As illustrated in Exhibit 10 (see page 9), the secondary private equity market has grown to about \$40 billion in just 15 years, developing to become the primary market connecting private equity buyers to sellers.

Investors allocate to private equity secondaries for various reasons, the primary one being the mitigating effect on the J-curve. Secondaries are typically purchased after a private equity fund has invested a substantial portion of its capital and entered its value-creation phase. That means secondary private equity investors may experience earlier capital distributions with a more evenly distributed pattern of returns, or smoothing of the J-curve, than primary private equity funds. According to Preqin, funds that are seven to 10 years old are considered the sweet spot for most secondary buyers.³ Funds of this age are typically returning capital to investors. Secondary private equity investments also have less "blind-pool" risk. With a new fund, buyers are getting the expertise of a manager but they do not know how the fund will be invested. Investors in secondary funds possess information about its holdings, and managers of secondary private equity portfolios can examine and analyze existing funds and their respective portfolio companies. Secondary portfolios have diversification benefits, too. Managers can diversify to a greater extent across a

³ Preqin, Private Equity Secondary Market: *Challenging the Illiquidity Myth*, March 2015

Exhibit 10: How PE Secondary Market Volume Has Grown



Source: Greenhill Cogent as of January 2016

variety of factors, including strategy type, fund, manager and vintage. This diversification benefits smaller investors who have not invested in, or do not have a long-term commitment to, private equity. Therefore, an investment in secondary private equity could quickly establish a core, diversified portfolio.

Current Market Opportunities

As noted, the private equity market has experienced rapid growth in recent years, resulting in higher deal multiples and growing supply of dry powder capital. In the current market, Global Investment Manager Analysis believes there are specific areas in private equity that are attractive and have the potential for strong long-term investment performance.

First, given the current low yield investing environment, relatively inexpensive credit and our position in the later stages of the market cycle, buyouts, especially in the lower/middle market, remain an attractive area to deploy capital in private equity. Small and middle market buyout investing is a particularly interesting alternative to the larger cap, more fully priced higher end of buyout market. Thus, the lower/middle end of the market offers the opportunity to take advantage of greater inefficiencies in the pricing of the underlying assets, potentially resulting in lower prices and higher returns.

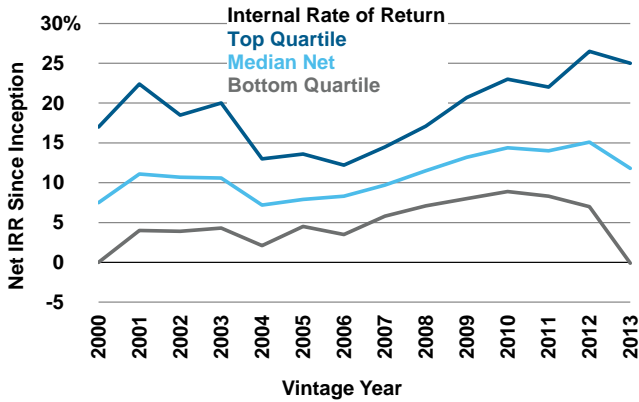
Second, as illustrated earlier, secondary private equity can be an effective way to access the private markets. The shorter life cycle, greater insight into a portfolio's composition and mitigating of the J-curve can be strong enhancements to a private equity portfolio.

Despite allowing investors greater liquidity and flexibility, secondary funds have produced competitive risk-adjusted returns relative to other private equity structures. Additionally, the continued growth in private equity is providing an ample opportunity set for secondaries moving forward. Secondary portfolios provide an attractive way for investors looking to access the illiquidity premium offered by private markets and therefore deserve consideration in investor portfolios. Overall, as in primary fund selection, selecting the right secondary fund manager is critical to performance.

Another attractive area in private equity is co-investments. Investors have several good reasons to consider private equity co-investments, especially multisponsored ones. First, they offer a lower cost of access to private equity strategies. Essentially, a co-investment offering lowers the traditional "2 and 20" fund level fees and carried interest and should reduce overall performance drag. Direct, single co-investments can further mitigate an overall private investment portfolio's J-curve because capital is deployed immediately, allowing investors to avoid paying up to five years' worth of management fees on capital not yet deployed. Furthermore, co-investments can concentrate capital normally reserved for diversified fund investments into a single position in a company or a handful of positions in companies, which can be very efficient provided that performance is as expected. Without the constraints of a fund, co-investors can focus on specific company attributes, and sectors and regions of interest, among other factors. They also have more control over pace and can ramp up a portfolio quickly or choose when to stay out of the market.

Finally, growth equity may provide an interesting opportunity to deploy capital today as signs point to a leveling off in venture capital financing. Despite a lackluster IPO window, valuations remain rich across the board, with a continued uptick in "up round" financings. However, there is some expectation that this trend will flatten or even decline which may put pressure on the valuations and funding resources of those companies that are not already at or near critical mass in terms of revenue and profitability. With that, growth capital may represent an attractive financing source for a growing number of companies poised to accelerate their revenue and profitability growth.

Exhibit 11: Wide Range of Returns Shows Importance of Choice of Manager



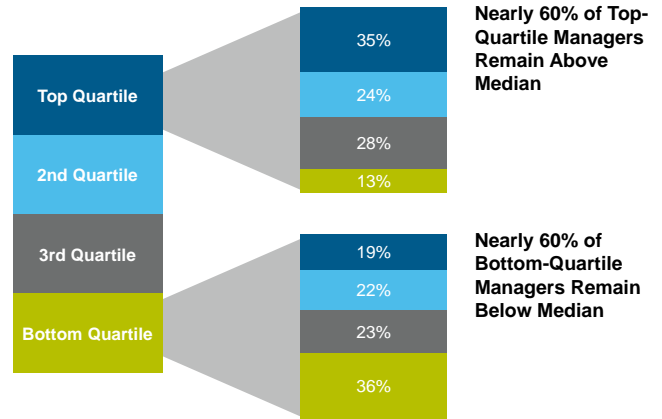
Source: Preqin Quarterly Update: Private Equity, April 2016

Manager Selection Is Key

In conclusion, as with all investments today, but particularly with private equity, manager selection is the key. Historic performance between top-quartile and bottom-quartile managers has been dramatically different, reflecting the importance of good manager due diligence and selection. During 2007, the difference between the top and bottom quartile internal rate of return boundaries was around 9%. However, in recent years this difference has become larger with the spread rising to more than 14% in 2011 and in excess of 20% in 2012.⁴

While Exhibit 11 clearly shows the value in selecting a top-quartile manager, another major factor for investors in PE is the likelihood that the manager will continue to perform well in the future. Exhibit 12 shows the probability that the top-quartile managers remain in their top-performing status overtime.

Exhibit 12: PE Manager Performance Shows Persistence



Source: Blackstone; Steven N. Kaplan, Robert S. Harris, Tim Jenkinson, Rudiger Stucker, "Has Persistence Persisted in Private Equity? Evidence from Buyout and Venture Capital Funds" (February 2014). Darden Business School Paper: 2304808. Vintage year performance data for US buyout and venture capital funds from The Burgiss Group representing 1400 private equity funds derived from the holdings of over 200 institutional investors. Vintage year performance from 1984 to 2008. At the time of survey, vintages are only through 2008 since more recent vintages may still be investing and have few realizations. Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized.

The diagram also outlines the statistic that nearly 60% bottom-quartile managers remain below the median. Manager selection is a crucial decision, and based on numerous factors including past performance, choosing a top-quartile manager may provide more consistent results into the future. Strong manager selection and having access to the top funds are critical in building a successful private equity program. ■

⁴ Preqin Quarterly Update: Private Equity, April 2016.

Index Definitions

MSCI ALLCOUNTRY WORLD EX US INDEX This is a free-float-adjusted, market-capitalization-weighted index that is designed to measure equity

market performance in the global developed and emerging markets outside the US.

S&P 500 INDEX This capitalization-weighted index includes a representative sample of 500 leading companies in leading industries in the US economy.

Disclosures

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